IN THE SPECIFICATION:

Please amend the paragraph starting at page 2, line 5, and ending at line 16, as follows.

--On the other hand, a ray refracted by a refracting surface is still a ray ~~still~~ after being refracted, whereas in the DOE, a ray has the nature that the ray is divided into lights of respective orders after being refracted. Therefore, when the DOE is used in a lens system, such grating design that a beam of a wavelength area used concentrates in a particular order (hereinafter referred to also as the design order) is ~~indispersable~~ indenspensable. Specifically, it is necessary that, in the entire area of the wavelength used in the system, the diffraction efficiency of a ray of the design order be sufficiently high.--

Please amend the paragraph starting at page 2, line 27, and ending at page 3, line 8, as follows.

--The characteristic of the diffraction efficiency of a DOE as shown in Fig. 10 of the accompanying drawings for diffracted light of the particular diffraction order is shown in Fig. 11 of the accompanying drawings. In Fig. 10, the DOE 1 is such that on a substrate (base) 2, a phase-type diffraction grating 4 formed of a predetermined material is formed into a sawtooth cross-sectional shape with a grating height (depth) d.--

Please amend the paragraph starting at page 4, line 9, and ending at line 22, as follows.

--Various propositions have been made as constructions for restraining the reduction in the diffraction efficiency for the other wavelengths than the design wavelength which becomes such a factor of flare. In a construction disclosed in Japanese Patent Application Laid-Open No. 9-127322 (corresponding U.S. Patent 6,157,488), as shown in Fig. 12 of the accompanying drawings, three different materials and two different grating thicknesses (d1 and d2) are ~~optiomally~~ optimally chosen and are disposed in proximity to each other at equal pitch distributions to thereby realize high diffraction efficiency in the entire visible area of the design order, as shown in Fig. 13 of the accompanying drawings.--

Please amend the paragraphs starting at page 5, line 6, and ending at page 6, line 1, as follows.

--Also, Japanese Patent Application Laid-Open No. 8-220482 presents a construction in a relief-type DOE having a sawtooth cross-sectional shape in which flare caused by the wavelength dependency of diffraction efficiency is improved. That is, the relief pattern surface of the DOE is divided into areas and the optimization of the depth of grooves in the relief pattern surface of the pertinent area is effected so that diffraction efficiency may become maximum for the central wavelength of light passing through the pertinent area. In addition, as shown in Fig. 15 of the accompanying drawings, diffraction efficiency is improved in the vicinity of the design wavelengths λa, λb and λc to thereby reduce flare. Also, in Japanese Patent Application Laid-Open No. 10-104411

(corresponding to U.S. Patent 6,011,651), the design wavelength of a kinoform-type diffractive optical element as shown in Fig. 10 of the accompanying drawings is set to a suitable value at ~~that~~ which it is difficult for color flare to be conspicuous, and specifically the grating thickness is adjusted, thereby reducing the quantity of unnecessary diffracted lights in the vicinity of the design wavelength.--

Please amend the paragraphs starting at page 6, line 11, and ending at line 23, as follows.

--On the other hand, Japanese Patent Application Laid-Open No. 8-220482 shows a construction in which in a DOE of single layer construction (hereinafter referred to as the single layer DOE) provided by a relief-type diffraction grating having a sawtooth-like cross-sectional shape, the central wavelength of transmitted light through each area is the design wavelength, whereby the wavelength dependency of diffraction efficiency is reduced, but there is made no description of a DOE having a laminated cross-sectional shape (hereinafter referred to as the laminated DOE) in which diffraction gratings are superposed in two or more layers.--

Please amend the paragraphs starting at page 7, line 3, and ending at line 27, as follows.

--In an optical system using the aforedescribed laminated DOE, in ~~contract~~ contrast with the single layer DOE, flare is greatly reduced, but it cannot be said that unnecessary diffracted lights are not at all present, and ~~although~~ slightly, unnecessary

diffracted lights remain. In the application of the laminated DOE to an optical system in which the photographing (projecting) condition does not change (for example, the reader lens of a copier or the projection lens of a liquid crystal projector), the influence of flare can be restrained to a problem-free level by the laminated DOE. In contrast, in an optical system for photographing an object under various conditions such as a camera or a video camera, it has become apparent that the slightly remaining flare poses a problem. Particularly when the flare component has wavelength dependency, color flare similar to that in the single layer DOE of Japanese Patent Application Laid-Open No. 10-104411 occurs. On the other hand, in the laminated DOE of Japanese Patent Application Laid-Open No. 11-64616 (corresponding to U.S. Patent 6,122,104), there are three or more design wavelengths which are wavelengths (peak wavelengths) for which diffraction efficiency becomes maximum. According to this DOE, the occurrence of color flare is considerably restrained.--

Please amend the paragraphs starting at page 8, line 7, and ending at line 18, as follows.

--In order to achieve the above object, in the diffractive optical element of the present invention, three layers each having a relief-type grating are formed of different materials, and at least three diffraction optical parts are provided in the boundary areas of the respective layers. The diffractive optical element is characterized in that the material forming each layer and the grating height are appropriately set so that in three wavelengths

which are the main wavelengths of the three primary colors, the diffraction efficiency for diffracted light of a predetermined order may be maximum.--

Please amend the paragraph starting at page 10, line 14, and ending at line 16, as follows.

--Fig. 12 shows a cross-sectional shape of a laminated-type diffractive optical element according to the prior art.--

Please amend the paragraphs starting at page 10, line 20, and ending at page 11, line 1, as follows.

--Fig. 14 shows a cross-sectional shape of a laminated-type diffractive optical element according to the prior art.

Fig. 15 is a graph showing the diffraction efficiency of a single-layer-type diffractive optical element according to the prior art.

Fig. 16 shows a cross-sectional shape of a laminated-type diffractive optical element according to the prior art.--

Please amend the paragraphs starting at page 11, line 13, and ending at page 12, line 11, as follows.

--Fig. 1 is a front view showing the construction of a diffractive optical element (DOE) according to Embodiment 1 of the present invention. In Fig. 1, the DOE 1 is of a construction in which a phase-type (relief-type) diffraction grating 3 is made on the

surface of a substrate 2. Fig. 2 shows a part of a cross-sectional shape taken on the section 2-2 of the diffractive optical element of Fig. 1. Fig. 2 is a view considerably more emphasized in the direction of the grating height (depth) than actual in order to make it easily understood.

The cross-sectional shape of the DOE according to the present embodiment is comprised of a laminated structure formed of three materials of a first layer 4, a second layer 5 and a third layer 6 differing in dispersion and provided on the substrate 2, and. The DOE further has a structure comprising a first diffraction grating having a diffraction grating surface 7 of a grating height d1 in the boundary area between the first layer 4 and the second layer 5, a second diffraction grating having a diffraction grating surface 9 of a grating height d2 in the boundary area between the second layer 5 and an air layer 8, and a third diffraction grating having a diffraction grating surface 10 of a grating height d3 in the boundary area between the third layer 6 and the air layer 8.--

Please amend the paragraphs starting at page 21, line 4, and ending at line 9, as follows.

--While in the present embodiment, a monochromatic light source such as a laser is used as the light source, this is not restrictive, but a white light source may be used or a diffraction-type light modulating element such as a grating light valve may be used as the light modulating element.--